

ATAKHANOV, B.I., prof.

Methods of reorganization in medicine. Vest. AMN SSSR 13 no.6:
85-88 '58 (MIRA 11:7)

1. Predsedatel' Uchenogo meditsinskogo soveta Ministerstva
zdravookhraneniya UzSSR.
(MEDICINE,
in Russia, organiz., problems (Rus))

ATAKHANOV, E.I., prof. TURAKULOV, Ya.Kh. (Tashkent)

Current problems of regional pathology in Uzbekistan. Klin.med.
36 no.6:3-8 Jo '58 (MIRA 11:7)
(PUBLIC HEALTH
in Russia, problems (Rus))

ATAKHANOV, E.I., prof.

Paths of development and further tasks of medical science in
Uzbekistan; on the projected plan of development for medical
science in Uzbekistan. Vest.AMH SSSR 14 no.6:74-78 '59.

(MIRA 13:6)

(UZBEKISTAN--MEDICINE)

ATAKHANOV, E.I., prof. (Tashkent)

Pathogenic treatment of anemia during gastrointestinal diseases
in tropical countries. Klin.med. 37 no.7:82-92 J1 '59.

(MIRA 12:10)

1. Iz kafedry propedevтики vnutrennikh bolezney (zav. - prof.
E.I.Atalchanov) pediatricheskogo i sanitarnogo fakul'tetov
Tashkentskogo meditsinskogo instituta.

(GASTROINTESTINAL DISEASES compl.)

(ANEMIA etiol.)

ATAKHANOV, E. I. (Moscow)

"The Effect of Chronic Intestine Diseases on the Blood System."

Report submitted for the Eight International Congress of Hematology, Tokyo, Japan,
4-10 Sep 60.

ATAKHANOV, E.I., prof.

Organizing research work in medical colleges. Med. zhur. Uzb.
no.5:3-6 My '60. (MIRA 15:3)

(UZBEKISTAN—MEDICAL RESEARCH)

ATAKHANOV, E.I., prof.

Urgent problems in the treatment of leucosis. Med. zhur. Uzb. no.10:
9-17 0 '60. (MIRA 13:12)

(LEUKEMIA)

ATAKHANOV, Ye.I.

Nomenclature of blood cells suggested by I.A. Kassirskii and G.A.
Alekseev. Probl. gemat. i perel. krovi 5 no. 8:28-31 Ag '60.
(MIRA 14:1)

(BLOOD CELLS) (KASSIRSKII, I.A.) (ALEKSEEV, G.A.)

ATAKHANOV, E.I., prof.

[Amoebic and nonamoebic colites; report at a conference devoted to diseases of tropical countries, September 1961, Tashkent] Ob amebnykh i neamebnykh kolitakh; doklad na konferentsii, posviashchennoi bolezniam v stranakh s zharkim klimatom, sentiabr' 1961 g., Tashkent. Moskva, Medgiz, 1961. 7 p. (MIRA 17:3)

ATAKHANOV, E.I., prof.; YULDASHEV, U.I., assistant

Amount of vitamin B₁₂ and iron in blood serum in stomach diseases.
Med. zhur. Uzb. no.4:8-13 Ap '61. (MIRA 14:5)

1. Iz kafedry propedevtiki vnutrennikh bolezney pediatricheskogo
i sanitarno-gigiyenicheskogo fakul'tetov Tashkentskogo gosudarstvennogo
meditsinskogo instituta.

(STOMACH--DISEASES)

(SERUM)

(IRON IN THE BODY)

(CYANOCOBALAMINE)

ATAKHANOV, E.I., prof.

Eighth International Congress of Hematologists in Tokio. Med. zhur.
Uzb. no.4:58-62 Ap '61. (MIRA 14:5)
(HEMATOLOGY—CONGRESSES)

ATAKHANOV, E.I., prof.; KHARAT'YAN, A.M.

Clinical use of protein hydrolysates. Med. zhur. Uz. no.6:5-11
Je '61. (MIRA 15:1)

1. Iz kafedry propedevtiki vnutrennikh bolezney sanitarno-gigiyenicheskogo i pediatricheskogo fakul'teta Tashkentskogo gosudarstvennogo meditsinskogo instituta.
(PROTEINS) (PARENTERAL THERAPY)

ATAKHANOV, E. I.; SHAMSUTDINOVA, R. K.; BUDYANSKIY, M. V. (Baku)

Interrelation of hypoproteinemia and the activity of intestinal enzymes in chronic enterocolitis. Klin. med. no.6:11-13 '61.
(MIRA 14:12)

1. Iz kafedry propedeviki vnutrennikh bolezney (zav. - chlen-korrespondent AN Uzbekskoy SSR prof. E. I. Atakhanov) pediatricheskogo i sanitarno-gigiyonicheskogo fakul'tetov Tashkentskogo meditsinskogo instituta.

(COLITIS) (BLOOD PROTEINS) (ENZYMES)

ATAKHANOV, E.I.; KHARAT'YAN, A.M.

Determination of free amino acids in blood serum of healthy subjects.
Lab. delo 7 no.6:13-18 Je '61. (MIRA 14:7)

1. Kafedra propedevtiki vnutrennikh bolezney (zav. - prof. E.I. Atakhanov) sanitarno-gigiyenicheskogo i pediatricheskogo fakul'tetov Tashkentskogo meditsinskogo instituta.
(AMINO ACIDS) (PAPER CHROMATOGRAPHY)

ATAKHANOV, E.I.

Basic results of research activities of medical workers in
Uzbekistan during the period 1958-1959. Vest.AMN SSSR 16 no.1:
58-63 '61. (MIRA 14:3)
(UZBEKISTAN--MEDICAL RESEARCH)

ATAKHANOV, E.I.

Urgent problems in organizing scientific research in medicine.
Vest. AMN SSSR 16 no.12:87-89 '61. (MIRA 15:2)
(MEDICAL RESEARCH)

ATAKHANOV, E.I., prof.

Anemias of intestinal origin. Terap.arkh. 33 no.8:52-59 '61.

(MIRA 15:1)

1. Iz kafedry propedevтики vnutrennikh bolezney pediatricheskogo i
sanitarnogo fakul'tetov Tashkentskogo meditsinskogo instituta.

Chlen-korrespondent AMN SSSR
(ANEMIA) (INTESTINES--DISEASES)

ATAKHANOV, E.I., prof.

Characteristics of the course of hepatitis in Uzbekistan and changes of some aspects of metabolism in it. Terap.arkh. 33 no.11:26-31 '61. (MIRA 15:5)

1. Iz kafedry propedevtiki vnutrennikh bolezney sanitarno-gigiyenicheskogo i pediatricheskogo fakul'teta (zav. - prof. E.I. Atakhanov) Tashkentskogo meditsinskogo instituta. Chlen-korrespondent AMN SSSR.

(UZBEKISTAN--HEPATITIS, INFECTIOUS)

ATAKHANOV, E.I., prof.

The 22d Congress of the CPSU and medical research in
Uzbekistan. Med. zhur. Uzb. no.1:3-12 Ja '62. (MIRA 15:3)

1. Predsedatel' Uchenogo meditsinskogo ^{soвета} goseta Ministerstva
zdravookhraneniya UzSSR.

(UZBEKISTAN—MEDICAL RESEARCH)

ATAKHANOV, E.I.; KHARAT'YAN, A.M.; BUDYANSKIY, M.V.; YULDASHEV, U.I.;
SHAMSUTDINOVA, R.K.; YULDASHEV, K.Yu.

State of some metabolic indices in peptic ulcer of the stomach
and duodenum and the effect of them of hydrolysate therapy.

Terap.arkh. no.7:85-91 J1 '62.

(MIRA 15:8)

1. Iz kafedry propedevtiki vnutrennikh bolezney (zav. - ohlen-
korrespondent AMN SSSR i AN Uzbekskoy SSR prof. E.I. Atakharov)
pediatricheskogo i sanitarno-gigiyenicheskogo fakul'tetov Tash-
kentskogo meditsinskogo instituta.

(PEPTIC ULCER) (PROTEIN HYDROLYSATES) (NITROGEN METABOLISM)

ATAKHANOV, E.I., prof.

Disorder of protein and vitamin metabolism in acute epidemic
hepatitis. Zdrav. Kazakh. 22 no.5:8-12 '62. (MIRA 15:6)
(HEPATITIS, INFECTIOUS)
(PROTEIN METABOLISM) (VITAMIN METABOLISM)

ATAKHANOV, E.I.

Enterocolites in a hot climate and the associated change in some
metabolic indices. Vest. AMN SSSR. 18 no.10:42-48 '63.
(MIRA 17:6)

ATAKHANOV, E.I.; FEYGIN, G.A.; KHAKAT'YAN, A.M.; LEVIN, G.S.; BULYANSKIY, M.V.;
BROYDE, V.B.

Comparative study of the protein and amino acid composition of
pathological exudative fluids. Vop.med.khim. 10 no.2:134-140
Mr-Apr '64. (MIRA 18:1)

1. Kafedra propedevtiki vnutrennikh bolezney sanitarno-gigiyenicheskogo
i pediatricheskogo fakul'tetov Tashkentskogo gosudarstvennogo meditsin-
skogo instituta; Uzbekskiy nauchno-issledovatel'skiy institut gematologii
i perelivaniya krovi i Tashkentskaya oblastnaya ob'yedinennaya bol'nitsa.

KHARAT'YAN, Al'fred Mikhaylovich; FEYGIN, Georgiy Aronovich;
ATAKHANOV, E.I., prof., red.; AVAKIMOVA, L.A., red.

[Paper chromatography of amino acids in clinical biochemistry]
Bumazhnaia khromatografiia aminokislot v klinicheskoi bickhimii.
Tashkent, Meditsina, 1965. 70 p. (MIRA 18:8)

1. Chlen-korrespondent AMN SSSR i AN UzbekSSR (for Atakhanov).

ATAKHANOV, E.I., prof. (Tashkent)

Enterogenic anemias. Sov. med. 28 no.5:39-46 My '65. (MIRA 18:5)

1. Chlen-korrespondent AMN SSS i AN Uzbekskoy SSR.

ATAKHANOV, E.I.; MANSUROV, Kh.Kh.; SEMENDYAYEVA, M.Ye.

Symposium on the enzymological diagnosis of diseases of the liver.
Sov. med. 28 no.9:148-150 S '65. (MIRA 18:9)

ATAKHANOV, E.M., prof.; KHARAT'YAN, A.M.; BUDYANSKIY, M.V.;
SHAMSUTDINOVA, R.K.

Protein hydrolysates and their use in chronic diseases of the
intestine. Terap.arkh. 33 no.3:75-83 Mr '61. (MIRA 14:3)

1. Iz kafedry propedevtiki vnutrennikh bolezney (zav. - prof.
E.I. Atakhanov) pediatricheskogo i sanitarno-gigiyenicheskogo
fakul'tetov Tashkentskogo meditsinskogo instituta. Chlen-
korrespondent AN Uzbekskoy SSR (for Atakhanov).
(PROTEINS) (INTESTINES--DISEASES)

KHODZHAYEV, Ch.; ATAKHANOV, O.

"Central Asia" by E.M. Murzaev. Reviewed by Ch. Khodzhaev, O. Atakhanov.
Izv. AN Turk. SSR no.3:114-115 '58. (MIRA 11:9)

1. Chardzhouskiy gosudarstvennyy pedagogicheskiy institut.
(Soviet Central Asia--Physical geography)

ATAKHANOV, O.

Relief of the valley of Amu Darya in its middle course. Izv.
AN Turk. SSR. Ser. biol. nauk no.3:44-49 '65. (MIRA 18:9)

1. Turkmenskiy pedagogicheskiy institut.

ATAKHANOV, Sh. A.

ATAKHANOV, SH. A. "Nematodes of Wild Plants and Weeds of the Left-bank Lowlands of the Amu Darye." Published by the Central Asia State U. Min Higher Education USSR. Central Asia State U imeni V.I. Lenin. Tashkent, 1956.
(Dissertation for the Degree of Candidate in Biological Science)

SO: Knizhnaya Letopis', No. 18, 1956,

ATAKHODZAEV, A.K.

SUBJECT USSR / PHYSICS CARD 1 / 2 PA - 1470
 AUTHOR FUKS, M.F., ATACHODZAEV, A.K.
 TITLE The Determination of the Time of the Orientation-Relaxation of
 Some Liquids from the Width of the Scattering Line.
 PERIODICAL Dokl. Akad. Nauk, 109, fasc. 5, 926-928 (1956)
 Issued: 10 / 1956 reviewed: 11 / 1956

The present work investigates the distant ranges of the wing (edge?) of the line by means of the usual photographic photometrization. The three mercury lines 4358, 4347 and 4339 Å served as a standard of intensity. In the case of the normal operation of the lamp used here the ratios of the intensities of these three lines were 1 : 1/18 : 1/58. The breadths of the lines of the direct and of the scattered light were measured by means of a comparator at three points, viz. where intensity diminishes by the 3, 2-, 18-, and 58-fold respectively. (This corresponds to the width of the second line at the level of the third, to that of the first at the level of the second, and to that of the first line at the level of the third respectively). $1/n = 1/(1 + \tau^2 (2\pi \Delta \nu_n)^2)$ or $\tau = \sqrt{n-1} / 2\pi \Delta \nu_n$ is found. Here $\Delta \nu_n$ denotes the true half width of the scattering line at the point where intensity decreases by the n-fold as against the middle of the line. The last mentioned formula forms the basis of the formula mentioned here for the determination of τ .

In connection with these experiments $n = 3, 2; 18$ and 58 . If in the liquid under investigation the processes take place with only one single relaxation time, the three half width $\Delta \nu_{3,2}$, $\Delta \nu_{18}$ and $\Delta \nu_{58}$ must lead to the same value of τ . (The

Dokl.Akad.Nauk, 109, fasc.5, 926-928 (1956) CARD 2 / 2 PA - 1470

three corresponding values are denoted by $\tau_{3,2}$, τ_{18} and τ_{58}). In the course of these tests practically the same values were found for τ_{18} and τ_{58} . $\tau_{3,2}$ is mostly somewhat higher than τ_{18} , but this difference is probably not real. The measuring values of $\tau_{3,2}$, τ_{18} and τ_{58} of the 20 liquids investigated are shown in a table. The most accurate values are apparently those of τ_{18} . Next, the behavior of some substances is described; thus, nitrobenzol probably has two relaxation times.

The following results were obtained on the basis of this work: The edge of the scattering lines of the liquids is essentially relaxationlike. In the case of the liquids examined here (with the exception of nitrobenzol) the distribution of the intensities in the relaxation-dependent edge is well characterized by a single relaxation time. - In the case of similar substances as e.g. toluol and ether benzol or in the case of the halide derivatives of benzol, a certain connection between relaxation time and viscosity is found: with increasing viscosity and the dimensions of molecules relaxation time increases. This is not true in the case of comparison of various substances. The connection between the duration of the orientation of relaxation and viscosity is apparently more complicated than would be expected according to DEBYE'S formula.

INSTITUTION: State University Leningrad.

ATKHOZHAYEV, A.R.

PRIKHOT'KO, A.F.

24(7) p 3 PHASE I BOOK EXPLOITATION 80V/1365

L'vov. Universitet

Materialy X Vsesoyuznogo soveshchaniya po spektroskopii. t. 1: Molekulyarnaya spektroskopiya (Papers of the 10th All-Union Conference on Spectroscopy. Vol. 1: Molecular Spectroscopy) [L'vov] Izd-vo L'vovskogo univ-ta, 1957. 499 p. 4,000 copies printed. (Series: Its: Fizichnyy sbirnyk, vyp. 3/8/)

Additional Sponsoring Agency: Akademiya nauk SSSR. Komissiya po spektroskopii. Ed.: Gazer, S.L.; Tech. Ed.: Saranyuk, T.V.; Editorial Board: Lavitsberg, G.S., Academician (Resp. Ed., Deceased), Neporent, B.S., Doctor of Physical and Mathematical Sciences, Fabelinskiy, I.L., Doctor of Physical and Mathematical Sciences, Fabelinskiy, I.L., Doctor of Physical and Mathematical Sciences, Kornitskiy, V.G., Candidate of Technical Sciences, Rayskiy, S.M., Candidate of Physical and Mathematical Sciences, Klimovskiy, L.K., Candidate of Physical and Mathematical Sciences, Miliyanovich, V.S., Candidate of Physical and Mathematical Sciences, A. Ye., Candidate of Physical and Mathematical Sciences.

Card 1/30

Fabelinskiy, I.L. Rayleigh-line Wing and Relaxation Processes in Liquids

117

Atakhodzhaev, A.K., M.P. Vuks, and V.L. Litvinov. Two Methods for the Determination of Molecular Orientation-relaxation Time

118

Malyshev, V.I. Study of the Transmission Spectrum of a Cloud in the Infrared Range

121

Kisel', V.A., and A.P. Stepanov. Reflection of Light From the Surface of a Liquid and Its Connection With Crystallization

126

Pekar, S.I. Inapplicability of the Fermi-Dirac Distribution to Electrons of Impurity Centers in Semiconductors and Crystal Phosphors

129

Mashkevich, V.S. Optical Properties of Diamond-type Crystals

Card 9/30

ATAKHODZHAYEV, A. K., Cand Phys-Math Sci -- (diss) "Spectroscopic
Study of the Rotatory Motion of Molecules in Liquids." Len, 1957.
10 pp (Len Order of Lenin State Univ im A. A. Zhdanov), 100 copies
(KL, 50-57, 117)

- 4 -

ATAKHODZHAYEV, A.K.; VUKS, M.F.; LITVINOV, V.J.

Two methods for the determination of the oriented relaxation time
of molecules. Fiz. sbor. no.3:118-120 '57. (MIRA 11:8)

1., Leningradskiy ordena Lenina gosudarstvennyy universitet im. A.A.
Zhdanova.

(Light---Scattering) (Spectrum, Molecular)

SOV/51-4-6-8/24

AUTHORS: Atakhodzhayev, A.K., Vuks, M.F. and Plaksina, K.V.

TITLE: Broadening of the Scattering Line and the Orientational Relaxation Time of Solutions (Ushireniye linii rasseyaniya i vremya oriyentatsionnoy relaksatsii rastvorov)

PERIODICAL: Optika i Spektroskopiya, 1958, Vol IV, Nr 6, pp 763-766 (USSR)

ABSTRACT: To find the relationship between the orientational relaxation time of molecules and viscosity of the medium it is usual to study solutions. Qualitative measurements, carried out in the authors' laboratory many years ago, had shown that, in certain cases, transition from the pure liquid to a solution is accompanied by broadening of the scattering line which can be observed with the naked eye. The present paper reports a more detailed investigation of this phenomenon. Five liquids with intense anisotropic scattering were chosen for this investigation; they were: hydrogen disulphide, chlorobenzene, bromobenzene, benzophenone and salol. The first three liquids possess low viscosity and produce a wide relaxational wing on scattering of light, the last two liquids possess high viscosity and produce a very narrow relaxational wing. The following liquids with weak anisotropic scattering were used as solvents: ether, ethyl alcohol, acetone,

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SOV/51-4-6-8/24

Broadening of the Scattering Line and the Orientational Relaxation Time of Solutions

carbon tetrachloride, cyclohexane and heptane. Intensities of the anisotropic scattering of the liquids used as solvents are, compared with the anisotropic scattering of benzene, equal to 0.092, 0.046, 0.146, 0.060, 0.064 and 0.108 respectively. To ensure that scattering of light from the solute molecules is several times higher than the scattering from the solvent the following concentrations were used: hydrogen disulphide 10% by volume, chlorobenzene and bromobenzene 15%, benzophenone and salol 6%. Broadening of the scattering line in solutions was studied by two methods: the resonance filter method (Ref 1) and the spectroscopic method (Ref 2). Because of the small light power of the apparatus used by the authors, it was not possible to measure broadening of the scattering line of the solvents themselves. It was found in the majority of cases the relaxational wing in solutions is considerably wider than in pure liquids. The results of the experimental determination of the orientational relaxation time for molecules of hydrogen disulphide, chlorobenzene, bromobenzene, benzophenone and salol in solutions are given in Tables 1-3 which also contain data for pure liquids.

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SOV/51-4-6-8/24

Broadening of the Scattering Line and the Orientational Relaxation Time of Solutions

Benzophenone and salol were investigated only in solution in carbon tetrachloride. The results shown in the tables indicate that both the methods used give practically identical results. In solutions, as well as in pure liquids, distribution of intensity in the relaxational wing fits well the formula of M.A. Leontovich with one relaxation time. The most remarkable result obtained in the work is the almost complete independence of the orientational relaxation time of solvent viscosity. This almost complete departure from the Debye's formula which gives the relationship between the orientational relaxation time of molecules and solvent viscosity may be explained as follows. Orientational relaxation of molecules is a rotational Brownian motion and, in contrast to the translational Brownian motion, it does not involve the forces between the solvent molecules and, therefore, does not depend much on solvent viscosity. The tables show that the relaxation times for all solutions, except the solutions of hydrogen disulphide in heptane are considerably smaller than the relaxation times of pure liquids. In the case of benzophenone and salol this may be explained simply by the difference between the viscosity of solutions and pure liquids. In the remaining

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Broadening of the Scattering Line and the Orientational Relaxation Time of
Solutions

SOV/51-4-6-8/24

cases decrease of the relaxation time in solution may be due to the lack of such orientational order around the dissolved molecules as that which exists around each molecule of a pure substance. Departure from the orientational order in solution makes re-orientation of molecules easier than in pure substances. There are 3 tables and 2 Soviet references.

ASSOCIATION: Leningradskiy Gosudarstvennyy Universitet, Fizicheskiy Institut
(Leningrad State University, Physics Institute)

SUBMITTED: June 7, 1957

Card 4/4

AUTHORS: Vuks, M.F. and Atakhodzhaev, A.K.

SOV/51-5-1-9/19

TITLE: Spectroscopic Determination of the Orientational Relaxation Time of Molecules in Liquids at High Temperatures (Spektroskopicheskiye opredeleniye vremeni orientatsionnoy relaksatsii molekul v zhidkostyakh pri povyshennykh temperaturakh)

PERIODICAL: Optika i Spektroskopiya, 1958, Vol 5, Nr 1, pp 51-56 (USSR)

ABSTRACT: The results are given of an experimental study of broadening of the scattering lines and calculation of the orientational relaxation time for a number of liquids in a wide range of temperatures. The authors used the photometric method described earlier (Refs 2, 3), with certain small refinements, to measure broadening of the scattering lines. The method of calculation of the relaxation time from the line broadening is described in the present paper. 23 organic liquids (such as hydrogen disulphide, benzene, pyridine, toluene, etc.) were studied at temperatures from 20-200°C, with the exception of nitrobenzene and styrene which were studied only at room temperature (table 1). Fig 1 shows the exciting and scattered light spectra for benzene at 28 and 203°C. Figs 2-5 show the dependences of the

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SOV/51-5-1-9/19

Spectroscopic Determination of the Orientational Relaxation Time of Molecules
in Liquids at High Temperatures

relaxation time (τ) on the reciprocal of the absolute temperature ($1/T$) for 16 of the 23 liquids studied. With the exception of benzaldehyde, acetophenone and methyl benzoate, the experimental points lie on straight lines. This means that the dependence of the relaxation time on temperature is given by the formula

$\tau = \tau_0 \exp(U/kT)$ where τ_0 is the half period of rotational oscillations and U is the activation energy. Linear dependence was also obtained for benzophenone and salol. For aniline, phenol, benzyl alcohol, benzaldehyde, acetophenone and methyl benzoate a departure from linearity is observed at temperatures above 80°C.

In similar substances the same dependence of τ on T is observed, for example in toluene and ethyl benzene. Table 1 gives the relaxation times at 20 and 200°C, the activation energies and the values of τ_0 . The relaxation times can be calculated theoretically using Debye's formula $\tau = \eta_M/kT$ where η_M is the volume of a molecule and η is the viscosity of a liquid. The results of such theoretical calculations

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Spectroscopic Determination of the Orientational Relaxation Time of Molecules
in Liquids at High Temperatures

of the relaxation times are given in Table 2. Comparison of Tables 1 and 2 shows that the calculated relaxation time is always greater than the experimental value. A further departure from Debye's formula is found in the absence of proportionality between τ and η/T when the liquid temperature is altered. In many cases proportionality between τ and η is observed. There are 5 figures, 2 tables and 5 Soviet references.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet, Fizicheskiy institut
(Leningrad State University, Physics Institute)

SUBMITTED: June 7, 1957

Card 3/3 1. Organic liquids - Molecular rotation 2. Molecular rotation -
Spectra 3. Molecular rotation - Temperature factors
4. Photometry - Applications

ATAKHODZHAYEV, A.K.

Relaxation time of the anisotropy of solutions in comparison
to dipole relaxation. Trudy UZGU no.117:13-18 '62.

(Solution (Chemistry))

(Dipole moments)

(MIRA 16:7)

ATAKHODZHAYEV, A.K.

Determination of the time of orientational relaxation of
molecules of xylene isomers in various solvents. Trudy Uzb
no.117:45-52 '62. (MIRA 16:7)

(Xylene—Molecular rotation)

ATAKHODZHAYEV, A.K.

Studying the rotational mobility of molecules of p-,o-dichloro-
benzene and their solutions. Izv.AN Uz.SSR.Ser.fiz.-mat.nauk 6
no.1:86-88 '62. (MIRA 15:4)

1. Samarkhandskiy gosudarstvennyy universitet.
(Benzene---Molecular rotation)

S/185/62/007/007/007/010
I048/I248

AUTHORS: Atakhodzhaev, A.K. and Vuks, M.F.

TITLE: The reorientation of molecules in a liquid and
comparison of the relaxation times

PERIODICAL: Ukrains'kyi fizychnyy zhurnal, v.7, no.7,
1962, 762-768

TEXT: The authors compare measurements of the time of
relaxation (τ) of the molecular anisotropy in a liquid obtained
by dispersion with results obtained by widening of the scattering
lines by dynamic double refraction (these two methods are based
on the [1] M.A. Leontovich theory, J. of Physics, USSR, 4, 499,
1941). Good agreement between the results of all three methods

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S/185/62/007/007/007/010
I048/I248

The reorientation of...

was obtained in the case of a large number of organic media (e.g., benzene, toluene, o,m,p-xylenes). No agreement was obtained in the case of aniline, nitrobenzene, diphenyl, and salol. The experimental error is 10% when the dispersion or widening methods are used. The validity of the expression $\tau = \frac{1}{3}\tau_{\text{dip}}$ was also examined (τ_{dip} is the time of dipole relaxation); the expression was found to be valid, within a fair range of accuracy, in the case of the majority of organic liquid studied; the most important exception was diphenyl ether for which $\tau = 18 \times 10^{-12}$ sec., while $\frac{1}{3}\tau_{\text{dip}} = 2.6 \times 10^{-12}$ sec. These differences are related to the non-rigidity of the molecules or to the superposition of dispersion effects on the usual orientation effect.

ASSOCIATION: *Samarkandskiy universitet, Leningradskiy universitet*
(University of Samarkand and University of Leningrad)

Card 2/2

ATAKHODZHAYEV, A.K.; FAYZULLAYEV, Sh.F.; OSMANOV, S.A.

Orientational relaxation times of molecules of certain
disubstituted benzenes and their determination by the
light diffusion method. Izv. AN Uz. SSR.Ser.fiz.-mat.nauk
'7 no. 6:86-90 '63. (MIRA 17:6)

1. Samarkandskiy gosudarstvennyy universitet.

SIDOROVA, A.I.; ATAKHODZHAYEV, A.K.; SHERMATOV, E.N.

Orientational interaction and the widening of the infrared absorption band of acetonitrile in solution. Ukr. fiz. zhur. 9 no.5:548-551 My '64. (MIRA 17:9)

1. Leningradskiy gosudarstvennyy universitet.

ATAKHODZHAYEV, A.K.; TUKVATULLIN, F.Kh.; ROZHDESTVENSKIY, M.I.; EGAMKULOV, A.;
YALILKHAJEV, G.D.

Rotary mobility and rigidity of certain molecules with two benzene
rings. Ukr. fiz. zhur. 9 no.5:552-555 My '64. (MIRA 17:9)

1. Samarkhandskiy gosudarstvennyy universitet.

ATAKHODZHAYEV, A.K.; FAYZULLAYEV, Sh.F.; OSMANOV, S.A.

Effect of temperature on the rotary mobility of molecules of the isomers
cresol and toluidine. Ukr. fiz. zhur. 9 no.5:555-559 My '64.
(MIRA 17:9)

1. Samarkandskiy gosudarstvennyy universitet.

ACCESSION NR: AP4039706

S/0051/64/016/006/1024/1026

AUTHOR: Atakhodzhayev, A. K.

TITLE: The study of intermolecular interaction by means of Raman line widths

SOURCE: Optika i spektroskopiya, v. 16, no. 6, 1964, 1024-1026.

TOPIC TAGS: Raman spectroscopy, line width, line broadening, polarized radiation, rotational Raman spectrum, intermolecular bond

ABSTRACT: Acetone in different solvents (water, methyl alcohol, chloroform, and carbon tetrachloride) was investigated to determine the effect of intermolecular interaction on the width of Raman lines. The Raman spectra of pure acetone were photographed with an ISP-51 spectrograph in mercury-arc light. The Raman lines were excited predominantly at 4358.3 Å. The line width was measured at the half-intensity level relative to the middle of the selected depolarized

Card 1/4

ACCESSION NR: AP4039706

lines. The scattered-light spectra have shown that on going from pure acetone to acetone solutions in water, three depolarization Raman lines (1225, 1429 and 2965 cm^{-1}) are noticeably narrowed. In another solvent (methyl alcohol) the 528 cm^{-1} line actually broadened. The change in the width of depolarization Raman lines reflects a change in the rotational mobility of the acetone molecules, due to weakening or strengthening of the orientational intermolecular orientation. The noticeable narrowing of the Raman lines in the acetone-water solution is due to an intermolecular interaction of the hydrogen-bond type. "In conclusion, the author thanks M. F. Vuks for interest in the work." Orig. art. has: 1 figure and 1 table.

ASSOCIATION: None

SUBMITTED: 22Aug63

DATE ACQ: 24Jun64

ENCL: 02

SUB CODE: OP

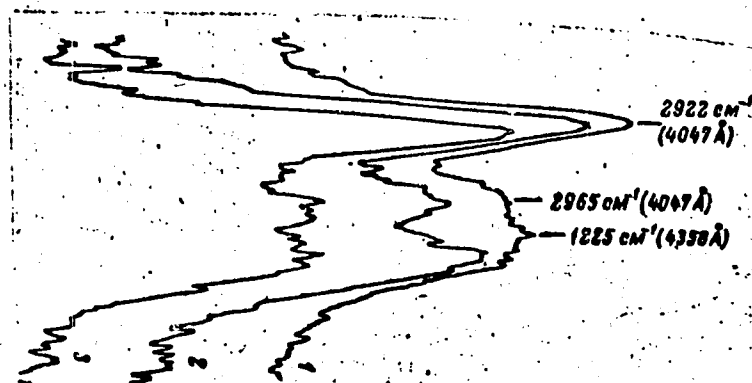
NR REF SOV: 004

OTHER: 001

Card 2/4

ACCESSION NR: AP4039706

ENCLOSURE: 01



Microphotographs of Raman spectra of acetone and its solutions
1 - acetone, 2 - acetone in water, 3 - acetone in methyl alcohol

Card: 3/4

ACCESSION NR: AP4039706

ENCLOSURE: 02

Widths of 3 Raman lines of acetone

4 Частота, см ⁻¹	2 Длина волны возбуждающего света, Å	3 Поларизация	1 Минимальная ширина (в см ⁻¹) при t = 30° C					
			5 ацетон	6 ацетон в воде	7 ацетон в метило-вом спирте	8 ацетон в хлоро-форме	9 ацетон в четырех-хлори-стом углероде	10 деполяризация
528	4358.3	дп	12	13	17	5.5	20	
1225	4358.3	дп	15	10	14	14	22	
1429	4358.3	дп	39	24	—	27	54	

1 - True width (in cm⁻¹) at t = 30C, 2 - wavelength of exciting light, 3 - polarization, 4 - frequency, 5 - acetone, 6 - acetone in water, 7 - acetone in methyl alcohol, 8 - acetone in chloroform, 9 - acetone in carbon tetrachloride, 10 - depolarization

Card 4/4

ATAXHODZHAYEV, A.K.

Temperature dependence of the rotational mobility of molecules
of isomers of dichlorobenzene and their solutions. Vest LNU 19
no.16:11-14 '64.

(MIRA 17:11)

ATAKHOLZEYEV, A.E.; FAYZULLAYEV, Sh.F.; OSMEROV, S.A.; SABIROV, L.M.

Spectroscopic determination of the orientational relaxation
times of disubstituted benzenes in solution. Vest. LGU 19
no.16:15-17 '64.

(MIRA 17:11)

ATAKHODZHAYEV, A.K.; TUKHVATULLIN, F.Kh.

Intercollegiate Conference on Optical Studies of Molecular
Motions and Molecular Interaction in Liquids and Solutions.
Izv. AN UzSSR. Ser. fiz.-mat. nauk 9 no.3:75-77 '65.

(MIRA 19:1)

1. Samarkandskiy gosudarstvennyy universitet imeni A.Navoi.
Submitted December 30, 1964.

L 3176 INT(1)

ACCESSION NR: AR5012265

UR/0058/65/000/003/D037/D037

SOURCE: Ref. zh. Fizika, Abs. 3D275

AUTHOR: Atakhodzhaev, A. K. 44, 55

TITLE: Use of the line width of combination scattering spectra to study inter-
molecular interaction 21, 44, 55

CITED SOURCE: Tr. Komis. po spektroskopii. AN SSSR, yyp. 1, 1964, 303-309 44, 55

TOPIC TAGS: combination scattering, solvent, spectroscopy

TRANSLATION: When acetone is diluted with water a narrowing of some of the depolarized combination scattering lines is observed. This may be due to a decrease in the rotational motion of the acetone molecules as a result of association with water. The narrowing effect is also observed when diluted with methanol, but to a lesser degree. This effect is not observed when acetone is diluted with an inert solvent. See also RZh Fiz, 1964-10D191.

SUB CODE: NP, OP

ENCL: 00

Card 1/1 *ml*

L 02191-67 EWT(m)/EWP(j) JW/RM

ACC NR: AR6031864

SOURCE CODE: UR/0058/66/000/006/D036/D036

AUTHOR: Atakhodzhaev, A. K.

TITLE: Study of the width and shape of Raman scattering lines of acetonitrile and its solutions using a DFS-12 photoelectric spectrometer 26
B

SOURCE: Ref. zh. Fizika, Abs. 6D286

REF SOURCE: Sb. Optich. issled. molekulyarn. dvizheniya i mezhmolekulyarn. vzaimodeystv. v zhidkostyakh i rastvorakh. Tashkent, Nauka, 1965, 5-8

TOPIC TAGS: acetonitrile, Raman scattering, acetonitrile solution, photoelectric spectrometer/DFS-12 photoelectric spectrometer

ABSTRACT: Measurements were made of the true widths and contours of Raman scattering lines 380, 918, 1376, 2249, and 2942 cm^{-1} of liquid acetonitrile and its solutions in water, methanol, ethanol, ether, and carbon tetrachloride. It was shown that the contours of most lines of both the liquid and the solutions are close to the dispersed form. The width of the depolarized line 380 cm^{-1} is noticeably greater than the width of the polarized line. Dissolution produced only a small

Card 1/2

L 02191-67

ACC NR: AR6031864

increase in the width $\nu = 380 \text{ cm}^{-1}$ in water, indicating only a small change in the rotational mobility of the molecules when dissolved. Measurements made of the width $\nu = 380 \text{ cm}^{-1}$ in the solid and liquid phases showed a value of $1.8 \cdot 10^{-12}$ sec for relaxation time. [Translation of abstract] (E. Broun) [SP]

SUB CODE: 20/

Card 2/2 *egh*

L 01930-67 EWT(m)/EWP(j) RM

ACC NR: AR6031863

SOURCE CODE: UR/0058/66/000/006/D036/D036

AUTHOR: Sagitova, E. V.; Atakhodzhayev, A. K.

3 3
B

TITLE: Effect of the concentration of a solution on the width of Raman lines of acetonitrile ^

SOURCE: Ref. zh. Fizika, Abs. 6D285

REF SOURCE: Sb. Optich. issled. molekulyarn. dvizheniya i mezhmolekulyarn. vzaimodeystv. v zhidkostyakh i rastvorakh. Tashkent, Nauka, 1965, 50-54

TOPIC TAGS: Raman spectrum, spectral line, acetonitrile spectral line, acetonitrile .

ABSTRACT: Measurements were made of the true widths of Raman lines of liquid acetonitrile (A) and its solution in water, carbon tetrachloride, ethyl ether, methanol, and ethanol for 33.50 and 67 mol. % concentrations. Changes in concentration were found to have little effect on the width of the lines. A change in width $\Delta \nu = 380 \text{ cm}^{-1}$ A in H_2O reflected a change in the rotational mobility of the

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L 01930-67

ACC NR: AR6031863

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molecules in solution. The conclusion is drawn that a change in the surrounding medium of the molecules has virtually no effect on the width of the lines.

E. Broun. [Translation of abstract]

[SP]

SUB CODE: 20/

Card 2/2 hs

L 3395-66 EWT(m)/EPF(c)/EWP(j)/T RM

ACCESSION NR: AP5015457

UR/0166/65/000/003/0075/0077

AUTHOR: Atakhodzhaev, A. K.; Tukhvatullin, F. Kh.

TITLE: Inter-university conference on optical investigations of molecular motion and intermolecular interaction in liquids and solutions

SOURCE: AN UzSSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, no. 3, 1965, 75-77

TOPIC TAGS: optic conference, scientific conference, molecular structure, molecular theory

ABSTRACT: The conference was held in Samarkand on 24-29 September 1964, and was organized by a commission coordinating the research on liquid-state physics at NTO MVO SSSR, the Ministry of Higher and Secondary Special Education of UzSSR, and the Samarkand State University. Approximately 150 persons were in attendance. Five plenary and more than 50 sectional papers were delivered.

The plenary papers were: "Rayleigh Scattering of Light and Molecular Theory of Non-electrolytes" (M. I. Shakhparonov, Moscow), "Phenomenological Theory of Electrooptical Phenomena. The Kerr Phenomenon in Liquids" (V. A. Zamkov, Moscow), "On the Theory of the Kerr Phenomenon in Liquids" (M. F. Vuks, Leningrad), "Rotational Motion of Molecules in Liquids and Solutions" (A. K. Atakhodzhaev, Samar-

Card 1/3

L 3395-66

ACCESSION NR: AP5015457

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kand), and "Influence of Interaction of a Polymer Solvent on the Optical Behavior of Macromolecules in a Solution" (E. V. Frisman and A. K. Dadivanyan, Leningrad).

Eight papers were delivered on optical research on polymer solutions by N. P. Zakudrayeva, M. I. Shakhparonov, and K. K. Podgoretskiy (Moscow), L. A. Petrova and A. P. Grishin, V. N. Tsvetkov and A. Ye. Grishchenko (Leningrad); I. A. Chernyavskaya and G. P. Roshchina (Kiev); V. E. Eskin and A. Ye. Nesterov (Leningrad); V. N. Tsvetkov and I. N. Shteninkova; S. I. Volkov, V. G. Baranov, and S. Ya. Frenkel (Leningrad); Birshiteyn (Leningrad); and V. Aslanyan (Yerevan).

Twenty papers were delivered on molecular motion in liquids and solutions by A. I. Sidorova, I. N. Kochnev, and E. N. Shermatov (Leningrad); A. K. Atakhodzhaev, F. Kh. Tukhratullin, E. V. Sagitova, and L. Sabirov (Samarkand University); V. G. Artamonov (Moscow); B. I. Nosenko and A. A. Ayvazova (Tashkent); P. G. Nikolayenko and A. I. Prorvina (Kemerovo); R. I. Podgayetskaya and A. A. Kolovskiy (Physics Institute SO AN SSSR); A. V. Korshunov; V. Ye. Volkov; and V. S. Korobkov.

Papers devoted to optical studies of intermolecular interaction in liquids were delivered by L. V. Levashin and D. M. Akbarova (Moscow); V. S. Korobkov, L. P. Zubanova, and L. N. Zvegintseva (Krasnoyarsk); P. A. Shakhverdov, A. N. Terenin, and Zelinskii (Leningrad); M. N. Rakhmatov and G. Gafurov (Bukhara); I. I. Al'-

Card 2/3

L 3395-66

ACCESSION NR: AP5015457

90

perovich; ^{44,55}U. G. Bakhshiyev; ^{44,55}V. M. Korovina (Dushanbe); ^{44,55}A. V. Sechkarev and N. I. Dvorenko; ^{44,55}A. A. Atokhodzhayev; ^{44,55}Ye. L. Zhikova; ^{44,55}M. I. Shman'ko; ^{44,55}I. S. Peralygin (Kazan); and ^{44,55}N. G. Bakhshiyev, ^{44,55}O. N. Girin, and ^{44,55}V. B. Libov (Leningrad).

Papers on the use of light scattering in the study of the structure of liquids and solutions were delivered by ^{44,55}M. F. Vuks, ^{44,55}L. I. Lisnyanskiy, and ^{44,55}S. A. Osmanov; ^{44,55}G. P. Roshchina, ^{44,55}A. S. Kaurova, and ^{44,55}I. A. Chernyavskaya; ^{44,55}L. V. Ianshina, ^{44,55}M. I. Shakhparonov, and ^{44,55}I. A. Merzhanov; ^{44,55}I. A. Bogdanov, ^{44,55}M. F. Vuks, and ^{44,55}N. B. Rozhdestvenskiy; and ^{44,55}V. L. Skripov and ^{44,55}Yu. D. Kolpakov (Sverdlovsk).

The section on optical constants of liquids and intermolecular interaction included papers by ^{44,55}A. S. Botin, ^{44,55}Yu. F. Novikov, and ^{44,55}A. F. Stepanov (Samarkand); and by ^{44,55}V. A. Kizel' and ^{44,55}A. F. Stepanov (Ryazan').

Papers on the theory of liquids were delivered by ^{44,55}A. K. Abas-Zade (Baku); ^{44,55}I. G. Mikhaylov and ^{44,55}V. L. Shutilov (Leningrad); ^{44,55}N. D. Kosov and ^{44,55}I. N. Korzun (Alma Ata); and ^{44,55}F. Gaybullayev (Namangan).

ASSOCIATION: ^{44,55}Samarkandskiy gosuniversitet im. A. Navoi' (Samarkand State University)

SUBMITTED: 30Dec64

ENCL: 00

SUB CODE: NP, GO

NR REF SOV: 000

OTHER: 000

Card 3/3

ATAKHODZHAYEV, A.K.

Rotational mobility of nitrobenzene molecules in solutions. Opt. i
spektr. 18 no.4:725-726 Ap '65. (MIRA 18:8)

L 45211-65 (d) Pg 4 IJR(a)

ACCESSION NR: AP5009145

8/0166/65/000/001/0005/0000

AUTHOR: Atakhodshayev, M.

TITLE: On the uniqueness of one problem in potential theory

SOURCE: AN UzSSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, no. 1, 1965, 5-8

TOPIC TAGS: potential theory, uniqueness theorem, differential equation, elliptic equation, boundary value problem, Laplace equation

ABSTRACT: It is shown that in approximate solutions of boundary problems for the Laplace differential equations of the elliptic type it is more convenient to use not classical potential of the simple and double layer, defined on a single curve, but potentials defined on two or several curves. The article is devoted to a proof of a uniqueness theorem for a problem of this type. The results are valid for plane contours or curves. Orig. art. has: 4 formulas.

ASSOCIATION: Institut matematiki im. V. I. Romanovskogo AN UzSSR (Institute of Mathematics, AN UzSSR)

Cont 1/2

L 45211-65

ACCESSION NR: JP5009145

SUBMITTED: 28 Jul 64

ENCL: 00

SUB CODE: NA

NR REF SOV: 001

OTHER: 000

Cord

2/2

ATAKHODZHAYEV, M.

Uniqueness of the solution to the inverse problem in the
theory of potential. Izv. AN Uz.SSR. Ser.fiz.-mat.nauk
9 no.3:63 '65. (MIRA 19:1)

1. Institut matematiki imeni V.I.Romanovskogo AN UzSSR.
Submitted January 15, 1965.

ATAKHOV, E.I.

A.N.Kriukov, a great worker in Soviet medicine; on his eightieth birthday. Izv.AN Uz.SSR.Ser.med. no.4:101-103 '58.

(MIRA 12:5)

(KRIUKOV, ALEKSANDR NIKOLAEVICH, 1878-)

ATAKISHIYEV, A.M.

Fight of the Communist Party for the strengthening of the union
between the laboring class and the peasantry during the first
years of the reconstruction of the national economy [in
Azerbaijani with summary in Russian]. Uch.zap.AGU no.12:121-
133 '57. (MIRA 12:1)
(Labor and laboring classes) (Peasantry)

ATAKISHIYEV, A. R., Cand Med Sci -- (diss) "On the pathomorphology of
interneuron ^{*synapses*} ~~synaptic junctions~~ of the peripheral nervous system in cancer
of ^{*the*} internal organs." Baku, 1958. 11 pp (Azerbaijdzhan State Med Inst in
N. Narimanov), 200 copies (KL, 17-58, 111)

- 74 -

EFENDIYEV, M.A., prof., zasluzhennyy deyatel' nauki, BYVAZOV, B.A., prof.
zasluzhennyy deyatel' nauki, ABDULAYEV, D.M., prof., zaslyzhennyy deyatel'
nauki, SELIMKHANOV, G.A., MAMEDBEKOVA, L.A., TER-KASPAROVA, I.R.,
SULTANOVA, Sh.A., MUSAYEV, Ya.A., ATAKISHIYEV, A.R., ABDULLAYEV, V.M.

Dzhalil Iusufovich Guseinov; on his 60th birthday. Arkh.pat. 20
no.7:93-94 '58 (MIRA 11:9)

1. Chleny Azerbaydzhanskogo obshchestva patologoanatomov (for
Selinkhanov, Mamedbekova, Ter-Kasparova, Sultanova, Musayev, Atakishiyev,
Abdullayev, V.M.)
(GUSEINOV, DZHALIL IUSUFOVICH, 1896-)

ATAKISHIYEV, A.R.

Micromorphological picture of the fine nerve structures of the intra- and extramural nervous system of the heart in myocardial infarct. Sud.-med.ekspert. 3 no.1:21-24 Ja-Mr '60. (MIRA 13:5)

1. Sektor fiziologii (rukovoditel' - akademik A.I. Karayev)
Akademii nauk Azerbaydzhanskoy SSR i Byuro glavnoy sudobno-
meditsinskoy ekspertizy (nachal'nik Yu.N. Semenov) Ministerstva
zdravookhraneniya Azerbaydzhanskoy SSR.
(HEART--INFRACTION)

ATAKISHIYEV, A.R. (Moskovskaya oblast., Klin, ul. Chaykovskogo, 39)

State of the synapses in the peripheral nervous system in cancer of the internal organs. Arkh.anat., gist i embr. 43 no.7:100-104 J1 '62. (MIRA 15:9)

1. Sudebno-meditsinskaya ekspertiza (nauchnyy rukovoditel' - prof. D.Yu.Gusseynov i prof. V.V.Kupriyanov) Klinskogo rayona Moskovskoy oblasti.

(NERVES, PERIPHERAL) (CANCER RESEARCH)

LUKATSKAYA, S.D.; ATAKISHIYEV, A.R.

Rare asymptomatic case of multiple renal calculi. Sud.-med.
ekspert. 6 no.3:56 J1-S'63. (MIRA 16:10)

1. Glavnaya sudebno-meditsinskaya ekspertiza (nachal'nik Yu.M.
Semenov) Ministerstva zdravookhraneniya Azerbaydzhanskoy SSR.
(CALCULI, URINARY)

ATAKISHIYEV, A.R.

Micromorphological picture of neural structures of the intramural and extramural nervous system of the heart in experimental myocardial infarction in rabbits. Report No.1. Su1.-med. ekspert. 6 no.4:33-34 O-D'63 (MIRA 10:12)

1. Moskovskaya oblastnaya sudebno-medicinskaya ekspertiza (nachal'nik L.N.Dodina).

ATAKISHIYEV, M. A.

"The Effect of Chemical Growth Stimulators on the Development of Weeds in Grass Crops and on Wheat in Azerbaydzhan." Cand Biol Sci, Azerbaydzhan State U imeni S. M. Kirov, 17 Nov 54. (BR, 6 Nov 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (11)

SO: Sum. No.521, 2 Jun 55

S/058/63/000/001/041/120
A062/A101

AUTHORS: Gadzhiyev, S. A., Atakishiyev, N. M.

TITLE: Electron polarization in $\pi^+ \rightarrow \pi^0 + e^+ + \nu$ decay

PERIODICAL: Referativnyy zhurnal, Fizika, no. 1, 1963, 34, abstract 18243
("Uch. zap. Azerb. un-t. Ser. fiz.-matem. i khim. n.", 1961,
no. 3, 81 - 85)

TEXT: The longitudinal polarization of decay electrons is calculated in the $\pi^+ \rightarrow \pi^0 + e^+ + \nu$ decay for the case of V-A interaction; corresponding formulae and diagrams are given. The polarization degree P_e strongly depends on the energy at angles θ between electron-neutrino momenta in the range $90^\circ - 175^\circ$; for $0^\circ \leq \theta \leq 45^\circ$ and $\theta \approx 180^\circ$, P_e is approximately equal to ± 1 , respectively, independently of the energy. Also expressions and curves for the electron energy spectrum are obtained. The authors conclude that the decay takes place mainly with an emission of positrons (electrons) with a right-hand (left-hand) polarization. The dependence P_e on the electron energy x , as found by the authors, gives evidence of the increase in the fraction of longitudinally polarized electrons with the increase of x . ✓

[Abstracter's note: Complete translation]
Card 1/1

ATAKISHIYEV, T.S., inzh.

Automatic line for egg processing. Mekh. i avtom. proizv. 18
no.1:4-6 Ja '64. (MIRA 17:8)

SLAVIN, R.M., kand. tekhn. nauk; ATAKISHIYEV, T.S., inzh.

Calculations of parameters for the cellular working parts of automatic machines for the collecting, selecting, and packing of eggs. Trakt. i sel'khoz mash. no.4x35-57 Ap '65. (MIRA 18x5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut elektrifikatsii sel'skogo khozyaystva.

ATAKISHIYEV, Z.M.

Diatase sills of the Lachinskiy anticlinorium. Izv. AN Azerb.
SSR. Ser. geol.-geog. nauk no.4:53-56 '64. (MIRA 17:12)

ATAKISHIYEV, Z.M.

Subeffusive dikes in the Tutkhun basin. Izv. AN Azsrb, SSR, Ser. geol.-
geog. nauk no. 1:38-45 '65. (MIRA 18:8)

1. PROF. YEFENDIYEV, F.A. FARADZH-ZADE, A.G. ATARISHIYEVA, F.A.

2. USSR (600)

3. Hemostatics

4. Citrate as a hemostatic agent in tubercular pulmonary hemorrhages and hemoptysis.
Probl. tub. No. 5, 1952.

9. Monthly List of Russian Acquisitions, Library of Congress, February, 1953. Unclassified

ATAKISHIYLVA, F.P., Cand Biol Sci -- (diss) "Oxidation--reduction
processes in ^{theliosis} ~~toxicosis~~ of ~~large~~ cattle." Kirovabad, 1959. 16 pp;
1 sheet of tables (Min of Agriculture AzSSR. Azerbaydzhan ~~Agriculture~~
~~Inst~~ Inst). 150 copies (KL,37-59, 107)

20

ATAMISHIYEVA, Z. N.

"Pharmacochemical Investigation of Different Parts of Oleander (Nerium Oleander L.) Cultivated in Azerbaydzhen," Dokl. AN Azerb SSR, Vol 9, No 6, pp 353-357, 1953

Investigated the above plant and determined the alkaloids found in the various parts (leaves, stem, blossoms). Lists the analytical results on each part, such as amount of resin, essential oils, lipoids, moisture, ash, etc. (RZhKhim, No 22, 1954)

Sum. No. 681, 7 Oct 55

AUTHOR: Ataklychev, Sh. SOV/165-58-6-8/24

TITLE: The Education of the National Pedagogical Cadres in Turkmenistan
in the Years of the Pre-War Five-Year Plans

PERIODICAL: Izvestiya Akademii nauk Turkmenskoy SSR, 1958, Nr 6,
pp 55-64 (USSR)

ABSTRACT: The article describes various measures which were taken for the
purpose of training the national teaching personnel in the
twenties and thirties, especially after the decision of the
XVI Party Congress, about the introduction of general compulsory
school attendance in 1930. The establishment of vari-staged
schools was supplemented by measures for raising qualifications
of the already active teachers, by creating a professional
press, by betterment of salaries, by awarding of honorary
titles, and so on. The teaching personnel, who came forth
from the folk, formed one of the most important supports of
the cultural revolutions and the build-up of socialism.

Card 1/2

SOV/165-58-6-8/24

The Education of the National Pedagogical Cadres in Turkmenistan in the Years of the Pre-War Five-Year Plans

There are 26 Soviet references.

ASSOCIATION: Arkhivnyy otдел MVD Turkmenskoy SSR (Archives Section of the Ministry of the Interior of the Turkmenian SSR)

SUBMITTED: July 25, 1958

Card 2/2

6,3000

9,4160

33951

S/665/61/000/003/015/018

E194/E420

AUTHOR: Atakova, Ye. M.

TITLE: Silicon photo-elements as signal converters

SOURCE: Akademiya nauk SSSR. Energeticheskiy institut.
Teploenergetika. no.3, 1961. Poluprovodnikovyye
preobrazovatelei solnechnoy energii. 129-136

TEXT: Silicon photo cells are used either without applied voltage as valves or as photo-diodes with voltage applied in the blocking direction. In either case inertia of the photo cell is important and the object of the present work was to measure it under various conditions. The photo cells investigated were produced by diffusion of phosphorus into p-type silicon. The area of light sensitive surface was 0.7 to 0.8 cm². Comparison of the cell volt-ampere characteristics with and without illumination shows that as compared with the valve condition of operation the photo-diode condition has the advantage of greater voltage sensitivity. The valve photo-element is a low output impedance device and so it is often used at the input to transistor amplifiers. The photo-diode has high output impedance

Card 1/4

+

33951

S/665/61/000/003/015/018
E194/E420

Silicon photo-elements ...

and is commonly used with valve amplifiers. Under valve conditions the maximum signal is limited by the no-load photo emf which reaches a saturation value as the illumination is increased and in any case cannot exceed the potential difference of the p-n transition, about 0.6 V. In the photo-diode condition the signal is limited by the applied voltage of 5 to 7 V, the photo-diode condition has the disadvantage of higher noise level. Under photo-diode conditions the kinetics are governed by relaxation of the photo current, which is proportional to the concentration of auxiliary unequilibrated current carriers at the p-n transition and, therefore, the relaxation time is the life of a hole. If however the depth of the p-n transition is less than the diffusion length of a hole, the time constant is the time of motion of a hole to the p-n transition. Moreover, the signal is delayed by the time constant of the RC circuit formed by the photo-cell. As the back-voltage applied to the photo cell is increased the capacitance of the p-n transition diminishes and so does the delay in the RC circuit. The relaxation of the photo emf under valve conditions has been considered elsewhere but in the

Card 2/6

Silicon photo-elements ...

33951

S/665/61/000/003/015/018

E194/E420

general case the rise time and the decay of photo emf is determined by the rate of carrier recombination, by the rate at which carriers are removed to the external circuit and by the time constant of the RC circuit in which R is the differential resistance of the p-n transition which may be calculated from the general equation of the photo cell. The kinetics of photo cells were investigated by illuminating them with modulated light and observing the relaxation curves on an oscillograph screen. Photo emf rise and decay times were measured from the oscillograph time scale. The volt-ampere characteristics were first determined without illumination. From relaxation curves the capacitance of the cells was determined with a back voltage of 1.5 V. The level of illumination and the load resistance were such that the relaxation voltage was less than the photo-diode voltage. In selecting the optimum load for a given level of light signal an attempt is made to achieve the lowest inertia, which involves reducing the load resistance, but the load resistance should not be too small or the voltage across it will not be high enough. The greater the level of illumination the lower the load

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resistance at which the photo emf of the element is not much less than the photo emf of open circuit. Consequently for strong light signals the optimum condition corresponds to high values of the ratio of resistance of the p-n transition at zero voltage to the load resistance. Curves of the time of rise and fall under optimum conditions as function of relative no-load photo emf are plotted in Fig.8. The times in microseconds being given on the y axis and the voltage on the x axis. The optimum condition was one in which the steady voltage on the photo cell was 90% of the no-load voltage. The numbers against the different curves correspond to five different elements of the characteristics shown in Table 1. There are 8 figures, 1 table and 5 references: 4 Soviet-bloc and 1 non-Soviet-bloc. The reference to an English language publication reads as follows: Ref.4: Prince M.B., Wolf M. J. Brit. Inst. Radio Engrs. 1958, v.18, no.10.

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9.4179
24.2600

S/058/62/000/008/126/134
A160/A101

AUTHOR: Atakova, Ye. M.

TITLE: Silicon photocells - signal converters

PERIODICAL: Referativnyy zhurnal, Fizika, no. 8, 1962, 43, abstract 8-3-85a
(In collection: "Teploenergetika". No. 3, Moscow, AN SSSR, 1961, 129 - 136)

TEXT: Investigated was the inertness of silicon photocells with a light-sensitive surface of $0.7 - 0.8 \text{ cm}^2$ obtained by diffusion of P in p-type silicon. The investigation was carried out under photodiode and barrier-layer conditions of connecting the photocells. The dark and light volt-ampere characteristics corresponding to the basic equation of the photocell are presented. The advantage of the photodiode condition, i.e. its higher voltage sensitivity, is pointed out. The relationship $V_v = V_{p=n} + IR$ corresponds to the photodiode condition, where V_v is the magnitude of the applied voltage (up to 5 - 7 v), $V_{p=n}$ - the voltage on the transition, I - the current in the external circuit, and R - the load resistance selected from the condition $IR = 0.9V_v$. The defi-

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ciency of the photodiode condition is its high noise level caused by the dark current. The maximum magnitude of the signal under the barrier-layer condition is limited by the magnitude of the photo-emf of the idle run circuit, ϕ_{ir} . The kinetics under the photodiode condition is determined by the relaxation of the photocurrent I_{ph} and by the life time of the holes τ . The curves of the voltage relaxation under the photodiode and carrier-layer conditions are analyzed. The voltage relaxation time in the photo-emf decreases with a decrease of R and an increase of $\varphi = q\phi/A_kT$, where q is the charge of the electron, ϕ - the photo-emf on the p-n transition, A - the coefficient depending on the nature of the semiconductor, k - Boltzmann's constant, and T - the absolute temperature. The method and a diagram of the measuring of the inertness of photocells are described. The kinetics under the photodiode condition was investigated for the case $RC > \tau$. The capacitance of the photocells at a reverse voltage of 1.8 v was determined on the basis of the relaxation curves. The time of the growing θ_g and the time of the drop θ_d at various relations of R_0/R were measured under the barrier-layer photo-emf condition and at $\varphi_0 = 1 - 8$. Hereby, R_0 is the magnitude of the internal resistance of the photocell. The relation curves of

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θ_g and θ_d were determined for the most favorable condition. In case of strong light signals the most favorable condition corresponds to high values of R_o/R , whereby, in the given case, R should not be too low. There are 5 references.

V. Sh.

[Abstracter's note: Complete translation]

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9.4160

AUTHOR: Atakova, Ye.M.

TITLE: Silicon photocells as signal converters

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 8, 1962, abstract 8-3-85 a (In collection: Teplo-energetika, no. 3, M., AN SSSR, 1961, 129 - 136)

TEXT: The time-lag of the response of silicon photocells with a light-sensitive surface of $0.7 - 0.8 \text{ cm}^2$, obtained by diffusion of P in p-silicon, has been investigated. The investigation was carried out for the photo-diode and the rectifier operating conditions of the photocells. Dark and light current-voltage characteristics, corresponding to the fundamental equation of the photocell, are given. The advantage of the photo-diode operating conditions, a higher voltage sensitivity, is underlined. Under photo-diode operating conditions the relation $V_B = V_{p-n} + IR$ is satisfied, where V_B is the value of the applied voltage (up to $5 - 7 \text{ V}$), V_{p-n} is the voltage across the junction, I is the current in the external circuit, and Card 1/3.

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R is the load resistance chosen to satisfy the condition $IR = 0.9 V_B$.
A disadvantage of the photodiode mode for operation is the high noise level caused by dark current. The maximal signal amplitude under rectifier operating conditions is limited by the value of the open-circuit photo-emf., $\Phi_{o.c.}$. The dynamics of the photodiode operation is governed by the relaxation of the photocurrent I_Φ and by the hole life time τ . Voltage-relaxation curves for the photo-diode and rectifier operating conditions are analyzed. The relaxation time of the photo-emf. decreases with a decrease of R and an increase of $\varphi = q \Phi / AkT$, where q is the electron charge, Φ is the photo-emf. across the p-n junction, A is a coefficient depending on the nature of the semiconductor, k is Boltzmann's constant and T is the absolute temperature. A circuit and a procedure for measuring the response time of photocells are described. The dynamics of the photo-diode operation was investigated for the case $RC > \tau$. The capacitance of photocells for an inverse voltage of 1.8 V was determined from relaxation curves. The rise time θ_r and decay time θ_d for the rectifier operation were measured for various ratios R_0/R , where
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R_0 is the value of the internal resistance of the photocell, and for $\varphi_0 = 1.8$. Curves of θ_r and θ_d for optimum operating conditions were plotted. Optimum operating conditions for large light signals correspond to large values of R_0/R . R should not be too small in this case. 5 references. [Abstracter's note: Complete translation.] X

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ATAKOVA, Ye. Ye.

PYASETSKAYA, A.R.; ATAKOVA, Ye.Ye. (Moskva)

Results of late observations of convalescents from Botkin's disease.
Klin.med. 33 no.8:38-42 Ag '55 (MLRA 8:11)

1. Iz ob"edinennoy bol'nitsy imeni Baumana (glavnyy vrach N.G.Orlov)
(HEPATITIS, INFECTIOUS,
sequelae)